Nelson Tunnel
Commodore Waste Rock Pile
Superfund Cleanup Update

Colorado Department of Public Health and Environment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY • REGION 8 • JUNE 2011

West Willow Creek Channel

Review of the Superfund Site:

1. September 2008 Nelson Tunnel/ Commodore Waste Rock Pile became a Superfund Site.
2. 2009 work began on the RI/FS by evaluating the environmental data previously collected to determine what other information was still needed.
3. In 2010, additional surface water samples called synoptic water samples were taken to measure how metal concentrations change as water travels downstream. Molecules were then compared to determine if and how concentrations had changed.
4. 2010: Sampling of the Commodore Waste Rock Pile and the county road running along side of the pile was conducted to determine if contaminant levels had changed because of the reconfiguration of the waste rock pile and re-routing of the Willow Creek Channel.

Background

The Nelson Tunnel/Commodore Waste Rock Pile Superfund Site is located in the Willow Creek Watershed on the east side of the San Juan Mountains in south central Colorado, Mineral County. The U.S. Environmental Protection Agency (EPA) and the Colorado Department of Human Health and the Environment (the Department) have been working together to reconfigure and reroute the Commodore Waste Rock Pile to control the speed of flows in West willow Creek during high run-off. They are also investigating ways to reduce the flow of contaminants draining from the adit of the Nelson Tunnel.

In 1889, a very rich silver vein was discovered along the banks of East Willow Creek. Shortly thereafter, two claims were staked on West Willow Creek. This became known as the Creede Mining District and lies about one mile north of present day Creede. One of the last silver boom towns in Colorado, mining would continue on and off for about 100 years.

The mining activity resulted in scattered mine waste piles and contaminated water discharging into the Willow Creek drainage. As a result of community based efforts, the Willow Creek Reclamation Committee (WCRC) was formed and they began cleaning up many

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Re-configured Commodore Waste Rock Pile

Background from Page 1

of these mine waste piles and mine waste water discharging into Willow Creek. By partnering with many different state and federal agencies, the majority of the waste rock piles located in both East and West Willow Creek were cleaned up.

Before much work could be done rehabilitating the flood plain southeast of town, the water quality upstream in Willow Creek needed to be improved. Samples taken by WCRC and EPA indicated the draining water from the Nelson Tunnel adit as the highest load of zinc and cadmium draining directly into West Willow Creek, a tributary to Willow Creek. West Willow Creek runs around and along the base of the Commodore waste rock pile.

Periodically during high spring run-off, water would surge over the Commodore Waste Rock pile, washing rocks, boulders, and other debris downstream, and occasionally into the town of Creede. In 2005, such an event knocked out previous preventative measures and washed through town, leaving the pile unstable.

EPA's emergency response team was called to permanently stabilize the pile and re-route West Willow Creek. While doing this they were able to decrease the creek's gradient and install two drop pools to slow the flow of water and catch sediments. That project was completed in 2010 as additional sampling began for the Remedial Investigation (RI).

Commodore Waste Rock pile before

Commodore Waste Rock pile after

Steps in the Superfund Process

After listing the site, the next destination is the Remedial Investigation (RI). The RI evaluates the environmental data collected by both the WCRC and EPA. This environmental data is used to fully characterize the flow of water into and out of the Nelson Tunnel and determine the extent of contamination, including risks to human health and/or the environment. Characterization of the water has included determining:

- where water entering the tunnel comes from and whether it is fresh or contaminated water,
- assess potential risks to human health and/or environment by sampling the Commodore Waste Rock pile and adjacent areas.

The next step is the Feasibility Study (FS) which describes and evaluate several potential cleanup alternatives. A comparative analysis of options is performed using EPA's seven evaluation criteria. These include:

- overall protection of human health and the environment;
- compliance with Applicable or Relevant and Appropriate Requirements (ARARs);
- long-term effectiveness and permanence;
- reduction of toxicity, mobility, or volume;
- short-term effectiveness; cost; and implementability.

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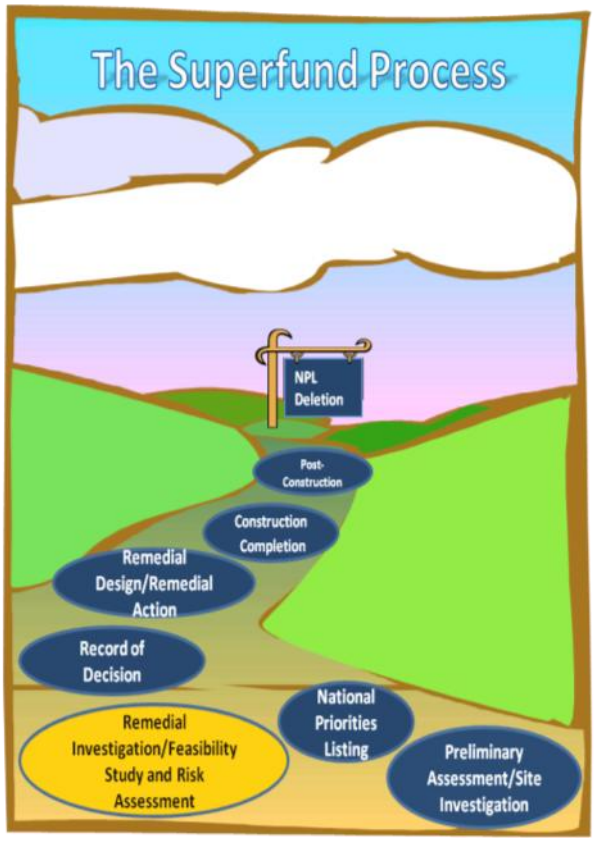
At the conclusion of this process, the Remedial Investigation and Feasibility Study (RI/FS) report is written.



Two final criteria remain—State and community acceptance. At this point in the process the public is guaranteed an opportunity to comment on the proposed plan..

The RI/FS Report will be available for the public to view on-line or at the WCRC meeting room located in the Creede Town Hall. The information in the RI/FS is used to propose a cleanup plan for the long-term, including preparing for the Operations and Maintenance of the remedy after EPA has completed their work. There will be a minimum 30-day comment period on the proposed plan.

The Proposed Plan (PP) is written to explain the preferred alternative and discuss the other alternatives that were studied. A formal public comment meeting will be held with a court reporter to record any formal comments the public may wish to make at the meeting or formal comments may be sent by mail or e-mail**.** After reviewing all comments, EPA will document the selected alternative, or remedy, in a document known as the Record of Decision . (ROD), which includes the response to comments

Following the signing of the ROD, work will continue with the Remedial Design (RD), Remedial Action (RA) or construction, testing the operations and performance of the remedy. Following construction, every five years the remedial work will be reviewed to check if it continues to protect human health and the environment.

Next Steps:

- Currently the EPA and the Department are finalizing draft copies of the Remedial Investigation report.
- Determine what other hydrological investigations into the mine tunnel need to be done to find a way to keep clean water separate from the mine workings..
- Finalize the RI and FS Reports and make the documents available on the web site and in the information repository for the public to review.
- Any recommendations from the reports will be advanced to the proposed plan to be evaluated for an alternative to remediate the contamination from the Nelson Tunnel.
- The agencies will continue monitoring the flows and metal concentrations from the Nelson Tunnel and Willow Creek and the Rio Grande River.

We'd like to hear what you think!

Please let us know if this information is helpful, timely or if there are other topics related to the Nelson Tunnel Commodore Waste Rock Superfund Site you would like to hear about.

Send your comments to linn.peggy @epa.gov or call 800-227-8917 ext. 6622

Need Information? Please Contact US!

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